

DOCUMENTATION THAT 'FLUORIDATION' IS INEFFECTIVE

EVIDENCE THAT INGESTED FLUORIDE DOES NOT IMPROVE DENTAL HEALTH

1. *Fluoride in Drinking Water: A Scientific Review of EPA's Standards*, National Research Council. (2006). National Academies Press, Washington D.C., p 13. <http://www.actionpa.org/fluoride/nrc/NRC-2006.pdf>

“. . . a body of information has developed that indicates the major anticaries benefit of fluoride is topical and not systemic.”
2. “Changing paradigms in concepts on dental caries: consequences for oral health care” by O. Fejerskov (2004) *Caries Research* 38: 182- 91 <https://www.ncbi.nlm.nih.gov/pubmed/15153687>

"When it was thought that fluoride had to be present during tooth mineralization to 'improve' the biological apatite and the 'caries resistance' of the teeth, systemic fluoride administration was [thought to be] necessary for maximum benefit. Caries reduction therefore had to be balanced against increasing dental fluorosis. The 'caries resistance' concept was shown to be erroneous 25 years ago, but the new paradigm is not yet fully adopted in public health dentistry, so we still await real breakthroughs in more effective use of fluorides for caries prevention."
3. “Adding fluoride to water supplies” by KK Cheng et al. (2007). *British Medical Journal* 335(7622):699-702. <http://fluoridescience.org/dental-caries/adding-fluoride-to-water-supplies/>

"Fluoride is most effective when used topically, after the teeth have erupted."
4. “Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States,” Centers for Disease Control and Prevention. (2001). *Morbidity and Mortality Weekly Report* 50(RR14): 1-42. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>

". . . fluoride's predominant effect is posteruptive and topical."

“The prevalence of dental caries in a population is not inversely related to the concentration of fluoride in enamel, and a higher concentration of enamel fluoride is not necessarily more efficacious in preventing dental caries."
5. “Achievements in Public Health, 1900-1999: Fluoridation of Drinking Water to Prevent Dental Caries,” Centers for Disease Control and Prevention. (1999). *Morbidity and Mortality Weekly Report* 48: 933-940. <https://www.cdc.gov/MMWR/preview/mmwrhtml/mm4841a1.htm>

". . . laboratory and epidemiologic research suggests that fluoride prevents dental caries predominately after eruption of the tooth into the mouth, and its actions primarily are topical for both adults and children."
6. “Fluoride Intake and Prevalence of Dental Fluorosis: Trends in Fluoride Intake with Special Attention to Infants,” SJ Formon, J Ekstrand, and E Ziegler (2000) *Journal of Public Health Dentistry* 60: 131-9. <http://onlinelibrary.wiley.com/doi/10.1111/j.1752-7325.2000.tb03318.x/full>

"Current evidence suggests that the predominant beneficial effects of fluoride occur locally at the tooth surface, and that systemic (preeruptive) effects are of much less importance."

7. "The case for eliminating the use of dietary fluoride supplements for young children," BA Burt (1999) *Journal of Public Health Dentistry* 59(4):269-74. <https://www.ncbi.nlm.nih.gov/pubmed/10682335>

"... there are three reasons why [the use of fluoride supplements] is inappropriate today among infants and young children in the United States. Evidence for the efficacy of fluoride supplements when used from birth or soon after is weak, supplements are a risk factor for dental fluorosis, and fluoride has little preeruptive effect in caries prevention."

[Note: Fluoride supplements (which were on the market before current drug safety and efficacy standards and do not have FDA drug approval) are still being prescribed for children whose home water source is not "fluoridated". Thus, supplements can be regarded as equivalent to drinking "optimally fluoridated" water. This fact argues that fluoridated water is likewise ineffective and inappropriate.]

8. "Overview of the history and current status of fluoride supplementation schedules" SM Adair (1999) *Journal of Public Health Dentistry* 59:252-8. <https://www.ncbi.nlm.nih.gov/pubmed/10682332>

"Fluoride supplementation regimens suffer from several shortcomings, the first of which may be their derivation from a time when the major effect of fluoride was thought to be systemic. Although evidence that fluoride exerts its effects mainly through topical contact is great, supplementation schemes still focus on the ingestion of fluoride."

9. "Prevention and Reversal of Dental Caries: Role of Low Level Fluoride," JBD Featherstone (1999) *Community Dentistry & Oral Epidemiology* 27: 31- 40. <https://www.ncbi.nlm.nih.gov/pubmed/10086924>

"Until recently the major caries-inhibitory effect of fluoride was thought to be due to its incorporation in tooth mineral during the development of the tooth prior to eruption...There is now overwhelming evidence that the primary caries- preventive mechanisms of action of fluoride are post-eruptive through 'topical' effects for both children and adults."

10. "Benefits and Risks of Water Fluoridation. An Update of the 1996 Federal-Provincial Subcommittee Report," D Locker (1999) Prepared for *Ontario Ministry of Health and Long Term Care*. <http://www.health.gov.on.ca/en/common/ministry/publications/reports/fluoridation/fluoridation.aspx>

"Although it was initially thought that the main mode of action of fluoride was through its incorporation into enamel, thereby reducing the solubility of the enamel, this pre-eruptive effect is likely to be minor. The evidence for a post-eruptive effect, particularly its role in inhibiting demineralization and promoting remineralization, is much stronger."

11. "New Evidence on Fluoridation" M Diesendorf and others (1997) *Australian and New Zealand Journal of Public Health* 21:187-190. <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-842X.1997.tb01681.x/abstract>

"Recent research on the mechanism of action of fluoride in reducing the prevalence of dental caries in humans shows that fluoride acts topically and that there is negligible benefit in ingesting it."

EVIDENCE THAT ADDING FLUORIDE CHEMICALS TO PUBLIC WATER SYSTEMS DOES NOT IMPROVE DENTAL HEALTH

1. “Fluoridation May Not Prevent Cavities, Scientific Review Shows” by Douglas Main, 6/29/15 <http://www.newsweek.com/fluoridation-may-not-prevent-cavities-huge-study-shows-348251>

This news report provides a useful summary of pertinent scientific assessments of the impact of community water fluoridation on the incidence of dental caries (tooth decay) in children and adults, and it provides links to the original research. Water fluoridation for the prevention of dental caries, A systematic review of existing research by Cochrane Oral Health Group, June 2015

2. Water fluoridation for the prevention of dental caries, A systematic review of existing research by Cochrane Oral Health Group, June 2015 <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010856.pub2/abstract>

This is the main subject of the Newsweek report cited in Item 1. This review of all research available worldwide—most done before 1975—found observed reductions in tooth decay in children of 26-35 percent (translating into 1-2 cavities per child). But it goes on to say “Our confidence in the size of the effect estimates is limited by the observational nature of the study designs, the high risk of bias within the studies and, importantly, the applicability of the evidence to current lifestyles.”

3. “The impact of tap water fluoridation on human health,” V Romero and others, *Revista médica de Chile* vol.145 no.2 Santiago, Feb. 2017 http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0034-98872017000200012&lng=en&nrm=iso&tlng=en

“The purpose of this review is to describe the osteological, neurological, endocrine and dermatological effects of fluoride ingestion. Additional aims are to evaluate whether the Chilean tap water fluoridation program has had any impact on dental health, and analyze the basis for the Chilean elementary school milk fluoridation program We discuss the finding that both public measures have no direct or remarkable effect on dental health, since topical dental hygiene products are the main and most effective contributors to the prevention of dental decay. We also suggest that the permanent and systematic ingestion of fluorides imposes health risks on the population.”

4. Tooth Decay Trends in Fluoridated Vs. Unfluoridated Countries citing various sources by Michael Connett, *Fluoride Action Network website*, June 2012 A review of WHO reports and other published data. <http://fluoridealert.org/studies/caries01/>
5. “Adding fluoride to water supplies” by K K Cheng and others, *British Medical Journal*, Oct 2007, 335(7622):699-702 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2001050/>

“Although the prevalence of caries varies between countries, levels everywhere have fallen greatly in the past three decades, and national rates of caries are now universally low. This trend has occurred regardless of the concentration of fluoride in water or the use of fluoridated salt, and it probably reflects use of fluoridated toothpastes and other factors, including perhaps aspects of nutrition.”

6. National Institute of Dental Research’s National Survey of Oral Health in the U.S. (1986-87) by Michael Connett, *Fluoride Action Network website*, July 2012 <http://fluoridealert.org/studies/caries03/>

This article explains the different interpretations of this federal government survey by proponents of fluoridation and by challengers of the fluoridation hypothesis. See also the following Items 6 and 7.

7. "New Studies Cast Doubt on Fluoridation Benefits" by Bette Hileman, *Chemical & Engineering News*, May 8, 1989. <http://www.slweb.org/NIDR.html>
8. "The Mystery of Declining Tooth Decay" by Mark Diesendorf, *Nature*, 07/1986; 322 (6075):125- https://www.researchgate.net/publication/19639179_The_Mystery_of_Declining_Tooth_Decay

This article explains the complexity of evaluating any benefit from fluoridation and identifies other factors that may influence the incidence of tooth decay in a community.

9. See also the following EXHIBITS A AND B: PROOF THAT "FLUORIDATION" FAILS TO REDUCE TOOTH DECAY

PROOF THAT 'FLUORIDATION' FAILS TO REDUCE TOOTH DECAY

Contrary to the claims of the CDC, the ADA, and other promoters of 'fluoridation', tooth decay has declined just as dramatically among populations who are NOT subjected to fluoridated water, both in the United States and around the world.

EXHIBIT A

World Health Organization Data:

DECAYED, MISSING OR FILLED TEETH (DMFT) AMONG TWELVE-YEAR-OLDS IN 14 NON-FLUORIDATED COUNTRIES AND 4 FLUORIDATED COUNTRIES

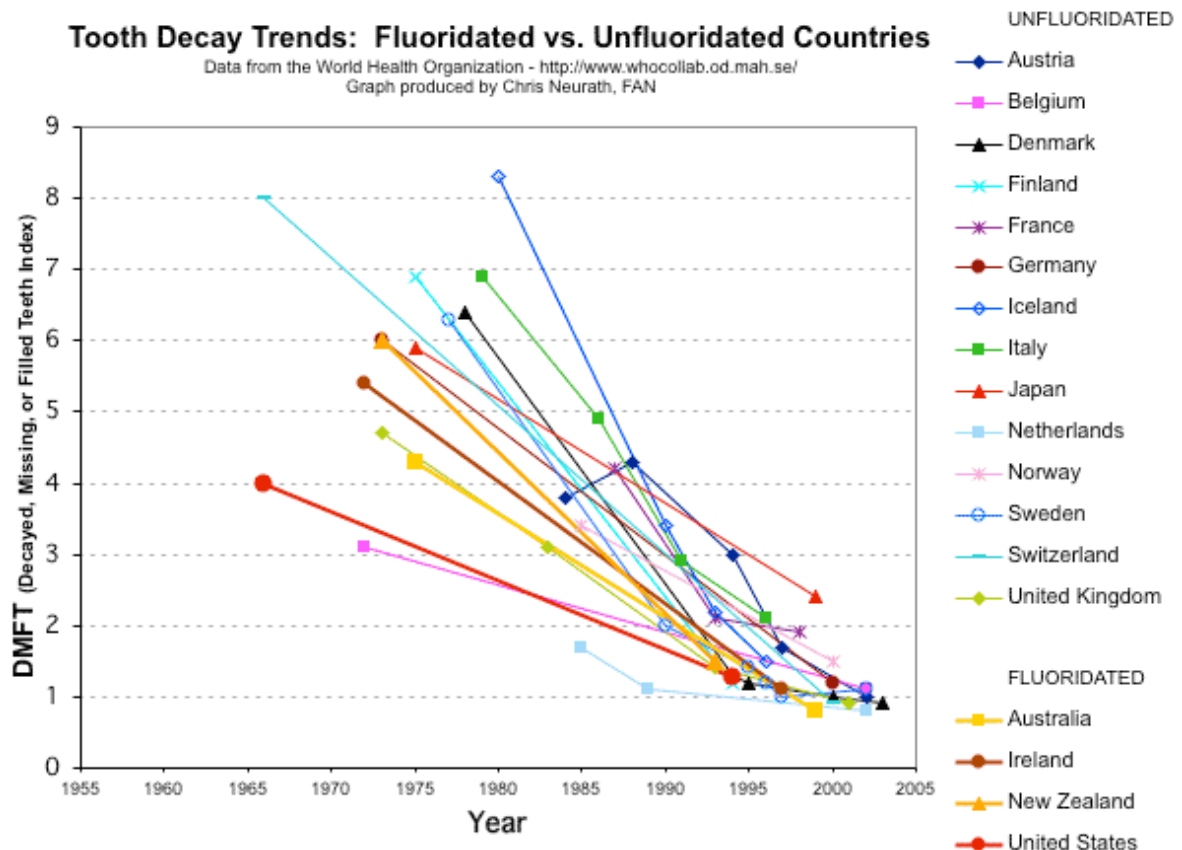


EXHIBIT B

A study of 39,000 American children aged 5-17 for the National Institute for Dental Research (NIDR) in 1986-87 by researchers Brunelle and Carlos failed to show a statistically significant difference in tooth decay between children who had been exposed to fluoridated water all their lives and children who had never been exposed to fluoridated water.

Nonetheless, the NIDR claimed there was 18% less decay in the fluoridated group. This result was obtained by counting Decayed Missing and Filled tooth *Surfaces* (DMFS) rather than *Teeth* (DMFT). There are 28 teeth in a child's mouth and 128 tooth surfaces: 16 teeth with 5 surfaces and 12 teeth with 4 surfaces (6 front top and bottom) = $80 + 48 = 128$.

The researchers reported the average DMFS score for children in fluoridated communities was 2.79 tooth surfaces, while the average score for children in non-fluoridated communities was 3.39 tooth surfaces. That's a difference of 0.6 tooth surface. They calculated this as a **relative** difference of 18%. The actual difference was $0.6/128$ or less than one half of 1% of all tooth surfaces.

Independent analysis of the data from this study found **no statistically significant difference** between the tooth decay rates for those two large groups of children. Lack of statistical significance means that the observed difference was within the margin of error and attributable to chance.

See <http://fluoridealert.org/content/ifin-290/>